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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/903,394	07/11/2001	Ramaswamy Murari	DEL-023	9467

25561 7590 03/16/2004

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EXAMINER

WATKINS III, WILLIAM P

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 03/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/903,394

Applicant(s)

MURARI ET AL.

Examiner

William P. Watkins III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 and 20-23 is/are allowed.
- 6) ☒ Claim(s) 1, 6, 7 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 January 2003 has been entered.

2. The 112 rejection in section 1 of the detailed portion of the office action mailed 29 July 2003 is withdrawn in view of applicant's amendments to the claims.

3. Claims 9-15, 8 and 20-23 are allowed for the reasons given in section 3 and 4 of the detailed portion of the office action mailed 29 July 2003.

4. Claims 2-5 are objected to because of the following informalities: there is no antecedent basis for "the flexible film" in line 3 of the currently amended version of claim 2,

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though the examiner constructs "the flexible film" as being the same as the "conductive inlay film" of the preamble, it is suggested that the language be clarified to remove the antecedent basis problem. Appropriate correction is requested. The claims are otherwise allowable for the reasons given in section 6 of the office action mailed 29 July 2003.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 6, 7, 16, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zohni (U.S. 6,380,060 B1).

The reference teaches a flexible dielectric structure with a conductive polymer under or in through holes (see Figure 2A, col. 3, lines 45-55). No particular weight is given to the electrostatic particle intended use as the instant claimed structure appears identical to that taught by the reference. The reference teaches that the holes and conductive pads of

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Figure 2 may be 4 to 14 mils in diameter (col. 5, lines 15-30). The instant invention claims a dielectric layer thickness of .5 to 10 mils. It would have been obvious to one of ordinary skill in the art to make the layer thickness of Zohni the same order of magnitude as the other described features of the reference. It further would have been obvious to select a conductive polymer for the via coating and conductive pads of Figure 2A, from the options given in col. 3, lines 45-55 for these structures.

7. Claims 1, 6, 7, 17, 18, and 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Chrai et al. (U.S. 6,303,143 B1) in view of Zohni (U.S. 6,380,060 B1).

Chrai et al. teaches in Figure 15, a dielectric layer with an electrode in an aperture and under an aperture, the layer being used as an electrostatic substrate support to deposit particles such as drugs and other substances (col. 7, lines 30-65). The dielectric layer may be flexible and 10 mils in thickness (col. 7, lines 47-50). The electrodes may be in a pattern (Figure 8). Zohni teaches the use of conductive polymers as electrodes in dielectric substrates (col. 3, lines 45-55). The instant invention claims a dielectric substrate for

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electrostatic deposition with polymer film electrodes in apertures and under apertures in dielectric films. It would have been obvious to one of ordinary skill in the art to use conductive films in the apertures of Chrai et al. in order to form electrodes because of the teachings of Zohni.

8. Applicant's arguments filed 28 January 2004 and 31 October 2003 have been fully considered but they are not persuasive.

Regarding the rejection using Zohni, applicant argues that the disclosure of a flexible dielectric sheet, with via with conductive polymer at col. 3, lines 45-55 would not be considered as being the structure of Figure 2 of the reference. The examiner disagrees. Figure 2 is described at col. 5, lines 15-20 as having a flexible dielectric layer. The examiner is of the opinion that one of ordinary skill in the art reading the reference would comprehend that the structure of Figure 2 is made of the materials disclosed at col. 3, lines 45-55, as both places refer to dielectric sheets. The conductive via of Figure 2 are isolated from each other by the dielectric sheet.

Regarding the rejection using Chrai et al. and Zohni applicant argues that there Chrai does not teach a flexible sheet because "relatively flexible" is not a flexible film. As

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the substrate thickness is recited as being about 10 mils, which is the thickness of the instantly disclosed film, and the substrate is called a "film" (col. 7, line 42-43), the examiner takes it as being a flexible film.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William P. Watkins III whose telephone number is 571-272-1503. The examiner works an increased flex time schedule, but can normally be reached Monday through Friday, 11:30 A.M. through 8:00 P.M. Eastern Time. The examiner returns all calls within one business day unless an extended absence is noted on his voice mail greeting.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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WW/ww

March 8, 2004

A handwritten signature in black ink, appearing to read "William P. Watkins III". The signature is written in a cursive, flowing style with a prominent loop at the end.

**WILLIAM P. WATKINS III
PRIMARY EXAMINER**